

Why Is Mercury a Problem?

Mercury is a nerve toxin that affects the brain and spinal cord, and can be dangerous when its vapors are inhaled. Mercury is especially toxic to the developing nervous system of a fetus or a young child.

Mercury-containing products need to be handled and disposed of properly to prevent people from becoming exposed and so that mercury is not released to the environment.

How Are We Exposed to Mercury?

Metallic mercury (e.g. from a broken fluorescent lamp or a mercury thermometer) slowly evaporates when exposed to the air that you may breathe. Mercury can also be released into the air when coal, wood, or oil are burned or when mercury-containing wastes are incinerated.

The amount of mercury present in the air from these sources is generally low. However, mercury in the atmosphere can fall to the ground when it rains or snows, and land on the soil, lakes, rivers, or the Bay.

Once mercury enters water bodies, biological processes change the metallic mercury into methyl-mercury, which is very toxic and can accumulate in aquatic creatures. In the food chain, small fish consume micro-organisms that take up the methyl-mercury. Larger fish eat the smaller fish and accumulate mercury in their tissue.

Humans and other mammals become exposed when they eat these mercury-contaminated fish.

Where Does Mercury Come From? What Should I Do with Wastes?

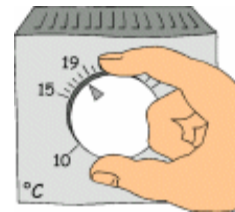
Mercury that is released into the environment comes from many human-made sources. Some of the most common products that contain mercury are:



Fluorescent Tubes and Compact Fluorescent Lamps



Mercury Thermometers



and Thermostats.

How Much Mercury Is in Products We Use?

One hundred, four-foot long fluorescent lamps contain about 4 grams of mercury. One mercury switch in a thermostat contains about 3 grams of mercury. The 0.5 grams of mercury that is typically found in a single thermometer could detectably pollute 5 million gallons of water in San Francisco Bay.

Natural Sources of Mercury:

- Mercury present in rocks, soil, and ores can be washed into creeks and rivers by storms.
- Mercury can also become dispersed throughout the atmosphere from forest fires and volcanic activity.

For Fluorescent, Mercury Vapor, Metal Halide, High Pressure Sodium and Neon Lamps:

- Do not break or crush the lamps (e.g., fluorescent tubes or compact bulbs).
- Do not throw the lamp in the trash or dumpster.
- Store spent lamps in a sturdy cardboard box (e.g. the ones they were shipped in) or other rigid container.
- Place a label on the container identifying its contents and the date you started collecting wastes in it.
- Keep containers in a secure, dry area until you are ready to recycle them.



For Thermostats, Switches, Relays, Probes, Gauges, Manometers, and Thermometers:

- Carefully remove the part of the device that contains the mercury, if possible. Do not break it open.
- Store the removed part in an airtight container (such as a plastic 5-gallon bucket with tight-fitting lid).
- Label the storage container "Mercury Waste for Recycling" and note the date you start accumulating the waste on the label.
- If you have a thermometer, store it in its original case or wrapped in padding in a sealed plastic bag.
- Do not store for more than one year.

Where Can I Recycle or Dispose of Wastes That Contain Mercury?

To protect yourself from future liability, keep records on the type of waste, the date of shipment, amount of waste, location from where the wastes are shipped and their destination.

If you are a small business that meets the requirements for a Conditionally Exempt Small Quantity Generator (CESQG) of Hazardous Waste, you may make an appointment with the Santa Clara County Hazardous Waste Recycling and Disposal Program **(408) 299-7300** to take mercury-containing wastes in for recycling or disposal along with your other hazardous wastes.



If your business does not meet the requirements for a Conditionally Exempt Small Quantity Generator of Hazardous Waste, a list of fluorescent lamp recyclers in California can be obtained by contacting the Sunnyvale Water Pollution Control Plant, Environmental Outreach Program at (408) 730-7716.

What Should I Do If Something That Contains Mercury Breaks?

- Remove all people not involved with the clean up from the area, especially children. If it occurs indoors, ventilate the room well for at least 24 hours after clean up is completed. Wear rubber or latex gloves to prevent direct contact with skin.
- Do not use a vacuum. It will put mercury vapor into the air and increase exposure risks.
- **Do not use a broom to pick up mercury. It will break the mercury into smaller droplets making it more difficult to pick up.**
- **Do not pour mercury down the drain.**

For a fluorescent lamps:

- Use pieces of cardboard to carefully push the broken glass into a pile, then it pick up. Store clean-up debris in a heavy plastic bag inside a box or in a rigid plastic container that can be sealed.
- Place a label on the container indicating broken lamps are inside, so that the recycler can handle them appropriately. Do not mix glass debris with unbroken spent lamps when they are recycled.

For thermometers, thermostats, or devices that contain larger quantities of mercury:

- Use a mercury-spill kit, if one is available. The sulfur powder in the kit will help prevent mercury from vaporizing.
- Pick up any broken glass or sharp objects with care. Place them on a paper towel. Fold the paper towel and place it in a sealable plastic bag. Secure the bag and label it "broken glass".
- Gather the mercury beads with a piece of thin cardboard by pushing beads together with slow, sweeping motions. Use a flashlight to look for additional mercury beads in crevices.
- Use an eyedropper to collect the mercury beads. Slowly and carefully squeeze the mercury onto a damp paper towel. Place the paper towel inside a sealable plastic bag and secure it. Label the bag to identify its contents.
- Place all the materials used to do the clean up in a small trash bag. (This includes cardboard, gloves, and eyedropper.) Secure the trash bag and label it.
- Contact the Santa Clara County Hazardous Waste Recycling and Disposal Program **(408) 299-7300** for an appointment to drop off the wastes if you are a Conditionally Exempt Small Quantity Generator of Hazardous Wastes.

Preventing

Mercury Pollution:

Information for Small Businesses



Mercury is a silver-colored heavy metal that is liquid at room temperature. It is toxic to humans and animals if inhaled, absorbed through the skin, or ingested in very small amounts.

Mercury pollution in our lakes, rivers, and coastal waters comes from many sources, but there are some things you can do to help reduce the amount of mercury released into the atmosphere and entering our fresh and salt-water resources.